GOVERNMENT OF INDIA
ATOMIC ENERGY
LOK SABHA

UNSTARRED QUESTION NO:1762
ANSWERED ON:26.07.2017
Nuclear Power Generation Capacity
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Will the Minister of ATOMIC ENERGY be pleased to state:

(a)the present nuclear power generation capacity in the country and the actual output thereof, reactor-wise along with the share of nuclear energy in total energy mix of the country;

(b)whether the Government proposes to expand the said capacity and set up new nuclear power plants and if so, the details thereof and the additional quantum of electricity likely to be generated there from;

(c)whether the Government proposes to take help from other countries in this regard and if so, the details thereof including the names of the countries which have agreed to cooperate in this regard;

(d)the steps taken/being taken by the Government for the development of indigenous technologies for generation of nuclear energy along with the time by which the self reliance in atomic fuel is likely to be achieved;

(e)the target set for nuclear power generation during the current year along with the details of nuclear power capacity added during each of the last three years and the current year; and

(f)the funds spent on maintenance and upgradation of nuclear power plants during the said period along with the per unit average cost of nuclear power generation?

Answer

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PRIME MINISTER'S OFFICE (Dr. JITENDRA SINGH):

(a)The present installed capacity of nuclear power in the country is 6780 MW. The generation of electricity in the year 2016-17 was 40001 Million Units. The reactor-wise capacity and generation details are enclosed as Annexure. The share of nuclear energy in the total electricity generation in the country was about 3% in 2016-17.

(b)Yes, Sir. There are presently six reactors under construction viz. Kakrapar Atomic Power Project (KAPP)-Units 3&4 (2X700 MW), Rajasthan Atomic Power Project (RAPP)-Units 7&8(2X700 MW) & Kudankulam Nuclear Power Project (KKNPP)-Units 3&4 (2 X 1000 MW) with a total capacity of 4800 MW and work has commenced on two reactors Gorakhpur Atomic Power Project (GHAVP)-Units 1&2 (2X700 MW) with a total capacity of 1400 MW. The government has recently accorded administrative approval and financial sanction for twelve reactors with a total capacity of 9000 MW. On the progressive completion of these reactors, nuclear power capacity in the country will reach 22480 MW (including 500 MW from BHAVINI). This capacity would produce about 158 Billion Units of electricity annually (at 80% Plant Load Factor).

(c)In parallel with the indigenous three-stage nuclear power programme, large capacity nuclear power reactors in technical cooperation with foreign countries are also being set up as additionalities for faster capacity addition.

In this regard, reactors in technical cooperation with Russian Federation are already being set up and discussions have commenced with companies from France and United States of America (USA).

(d)India is self reliant in indigenous Pressurised Heavy Water Reactors (PHWRs) technology in all aspects including associated nuclear fuel cycle. The PHWR technology which constitutes the first stage of the indigenous three-stage nuclear power programme has already achieved commercial maturity.

(e)The target set for nuclear power generation in the current year (2017-18) is 39000 Million Units of electricity. The capacity addition in each of the last three years and the current year are as follows:

Year 2014-15 2015-16 2016-17 2017-18
(upto May 2017)
Capacity Added (MW) 1000* - 1000** -
* KKNPP-1 **KKNPP-2

(f)The capital expenditure on operating stations and average tariff of nuclear power during the last three years are as follows:

Year 2014-15 2015-16 2016-17

Expenditure on Operating Stations (Rs. crore) 78.09 78.93 93.78

Average Tariff (Rs. per Unit) 2.78 2.87 2.95

Annexure

Annexure referred to in reply to Part (a) of Lok Sabha Unstarred Question No. 1762 for answer on 26/07/2017

Location & State/UT Unit Capacity(MW) Generation for Year 2016-17,
Million Units (MUs)*
Tarapur Maharashtra TAPS-1 160 1236
TAPS-2 160 935
TAPS-3 540 4159
TAPS-4 540 4530

Rawatbhata, Rajasthan RAPS-1@ 100 -
RAPS-2 200 1106
RAPS-3 220 1618
RAPS-4 220 1936
RAPS-5 220 1715
RAPS-6 220 1096

Kalpakkam, Tamil Nadu MAPS-1 220 1465
MAPS-2 220 1739

Kudankulam, Tamil Nadu KKNPP-1 1000 6212
KKNPP-2 1000 2340#

Narora, Uttar Pradesh NAPS-1 220 1655
NAPS-2 220 1724

Kakrapar, Gujarat KAPS-1 220 0$
KAPS-2 220 0$

Kaiga, Karnataka KGS-1 220 1742
KGS-2 220 1708
KGS-3 220 1063
KGS-4 220 2021

*The generation figures are rounded off to the nearest digit.
@RAPS-1 is under extended shutdown for techno-economic assessment.
KKNPP-2 was connected to the grid on August 29, 2016 and the generation is non-commercial. The unit commenced commercial operation from March 31st 2017.
$ KAPS-1&2 are under long shutdown for Renovation & Modernization.

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